WHAT IS CLAIMED IS:

1. A substrate comprising:

microporous membrane; and

a highly electropositive hydrophilic material capable of irreversibly binding one or more nucleic acids operatively positioned on or within the microporous membrane.

2. The substrate of claim 1 wherein the highly electropositive hydrophilic material is selected from the group consisting of:

silicon (Si), boron (B) and aluminum (Al), which have been rendered sufficiently hydrophilic by hydroxyl (-OH) or other groups.

3. The substrate of claim 1 wherein the microporous membrane comprises:

a polyamide matrix.

4. The substrate of claim 3 wherein the microporous membrane comprises:

a nylon matrix.

5. The substrate of claim 1 wherein the highly electropositive hydrophilic material is capable of irreversibly binding DNA.

6. The substrate of claim 1 wherein the highly electropositive hydrophilic material is capable of irreversibly binding RNA.

7. A multi-zone microporous membrane comprising:

at least one zone including at least one highly electropositive hydrophilic material capable of irreversibly binding one or more nucleic acids; and

at least one additional zone contiguous therewith, the at least one additional zone being void of any highly electropositive hydrophilic material capable of irreversibly binding one or more nucleic acids.

8. The microporous membrane of claim 7 wherein the highly electropositive hydrophilic material is selected from the group consisting of:

silicon (Si), boron (B) and aluminum (Al), which have been rendered sufficiently hydrophilic by hydroxyl (-OH) or other groups.

9. The microporous membrane of claim 7 wherein the microporous membrane comprises:

a polyamide matrix.

10. The microporous membrane of claim 7 wherein the microporous membrane comprises:

a nylon matrix.

11. The microporous membrane of claim 7 wherein the highly electropositive hydrophilic material is capable of irreversibly binding DNA.

12. The microporous membrane of claim 7 wherein the highly electropositive hydrophilic material is capable of irreversibly binding RNA.

13. The microporous membrane of claim 7 further comprising:

at least one more additional zone void of any highly electropositive hydrophilic material capable of irreversibly binding one or more additional nucleic acids.

14. The microporous membrane of claim 7 further comprising:

at least two more additional zones void of any highly electropositive hydrophilic material capable of irreversibly binding one or more additional nucleic acids.

15. The microporous membrane of claim 7 further comprising:

at least three more additional membrane zones void of any highly electropositive hydrophilic material capable of irreversibly binding one or more nucleic acids.

16. The microporous membrane of claim 7 further comprising:

at least one additional zone including at least one highly electropositive hydrophilic material capable of irreversibly binding one or more nucleic acids.

17. The microporous membrane of claim 7 further comprising:

at least two additional zones including at least one highly electropositive hydrophilic material capable of irreversibly binding one or more nucleic acids.

18. The microporous membrane of claim 7 further comprising:

at least three additional zones including at least one highly electropositive hydrophilic material capable of irreversibly binding one or more nucleic acids.

19. The microporous membrane of claim 7 wherein the highly electropositive hydrophilic material is capable of irreversibly binding RNA.

20. The microporous membrane of claim 7 further comprising:

at plurality of additional zones void of any highly electropositive hydrophilic material capable of irreversibly binding one or more nucleic acids.

21. A method for fabricating a microporous membrane comprising the acts of:

during the formation of a microporous membrane dope, combining a highly electropositive hydrophilic material with the microporous membrane dope; and

using the combined dope and highly electropositive hydrophilic material to form a microporous membrane.

22. A multi-zone microporous membrane comprising:

at least one zone comprising a highly electropositive hydrophilic material capable of irreversibly binding one or more nucleic acids; and

at least one zone functionalized to capture specific nucleic acid molecules.

23. The microporous membrane of claim 22 wherein the highly electropositive hydrophilic material is selected from the group consisting of: silicon (Si), boron (B) and aluminum (Al), which have been rendered sufficiently hydrophilic by hydroxyl (-OH) or other groups.

24. The microporous membrane of claim 22 wherein the microporous membrane comprises a polyamide matrix.

25. The microporous membrane of claim 22 wherein the microporous membrane comprises a nylon matrix.

26. The microporous membrane of claim 22 wherein the highly electropositive hydrophilic material is capable of irreversibly binding DNA.

27. The microporous membrane of claim 22 wherein the highly electropositive hydrophilic material is capable of irreversibly binding RNA.

28. A method for preparing a microporous matrices comprising the acts of:

preparing a dope for making a microporous membrane;

dispersing a highly electropositive hydrophilic material capable of irreversibly binding one or more nucleic acid types within the dope; and

using the dope to form the microporous membrane.

29. The method of claim 28 wherein the dispersing of the highly electropositive hydrophilic material capable of irreversibly binding one or more nucleic acid types act is effectuated during a solvent mixing act.

30. The method of claim 28 wherein the dispersing of the highly electropositive hydrophilic material capable of irreversibly binding one or more nucleic acid types act is effectuated before the addition of a polymer to form the dope.

31. The method of claim 28 wherein the dispersing of the highly electropositive hydrophilic material capable of irreversibly binding one or more nucleic acid types act is effectuated after the dope has been formulated.

32. A method for preparing a microporous matrices comprising the acts of:

placing a highly electropositive hydrophilic material in a polymer used to prepare a dope;

preparing a dope using the polymer having the highly electropositive hydrophilic material; and

using the dope to form the microporous membrane.

33. A method for preparing microporous matrices comprising the acts of:

providing a microporous membrane; and

coating a highly electropositive hydrophilic material capable of irreversibly binding one or more nucleic acid types onto the membrane such that the membrane is sufficiently saturated into the microporous membrane and the membrane is useful for the efficient and irreversible binding of nucleic acids thereto.

34. A method for fabricating microporous matrices comprising the acts of:

providing a dope solvent;

prior to the addition of a polymer to the solvent, dispersing a sufficient amount of highly electropositive hydrophilic material capable of irreversibly binding one or more nucleic acid types in the solvent;

adding a sufficient amount of polymer to the resultant such that a dope capable of being cast is produced thereby; and

using the dope to form a microporous membrane.

35. The method of claim 34 further comprising the act of:

during the polymer adding act, mixing the sufficient amount of polymer with the dope solvent.

36. The method of claim 34 further comprising the act of:

during the bound nucleic acid polymer dispersing act, mixing the sufficient amount of highly electropositive hydrophilic material capable of irreversibly binding one or more nucleic acid types with the dope solvent.

37. A method for amplifying nucleic acids comprising the acts of:

providing the substrate of claim 1;

exposing the membrane to a complex biological sample containing nucleic acid;

capturing the nucleic acid;

washing the membrane to remove non-bound proteins and cellular debris; and

amplifying the bound nucleic acid

38. The method of claim 37 further comprising the act of:

using the membrane having the bound nucleic acid as a template for further amplification cycles.

39. The method of claim 37 further comprising the act of:

storing the membrane having the bound nucleic acid for archival purposes.